MiniBooNE Report

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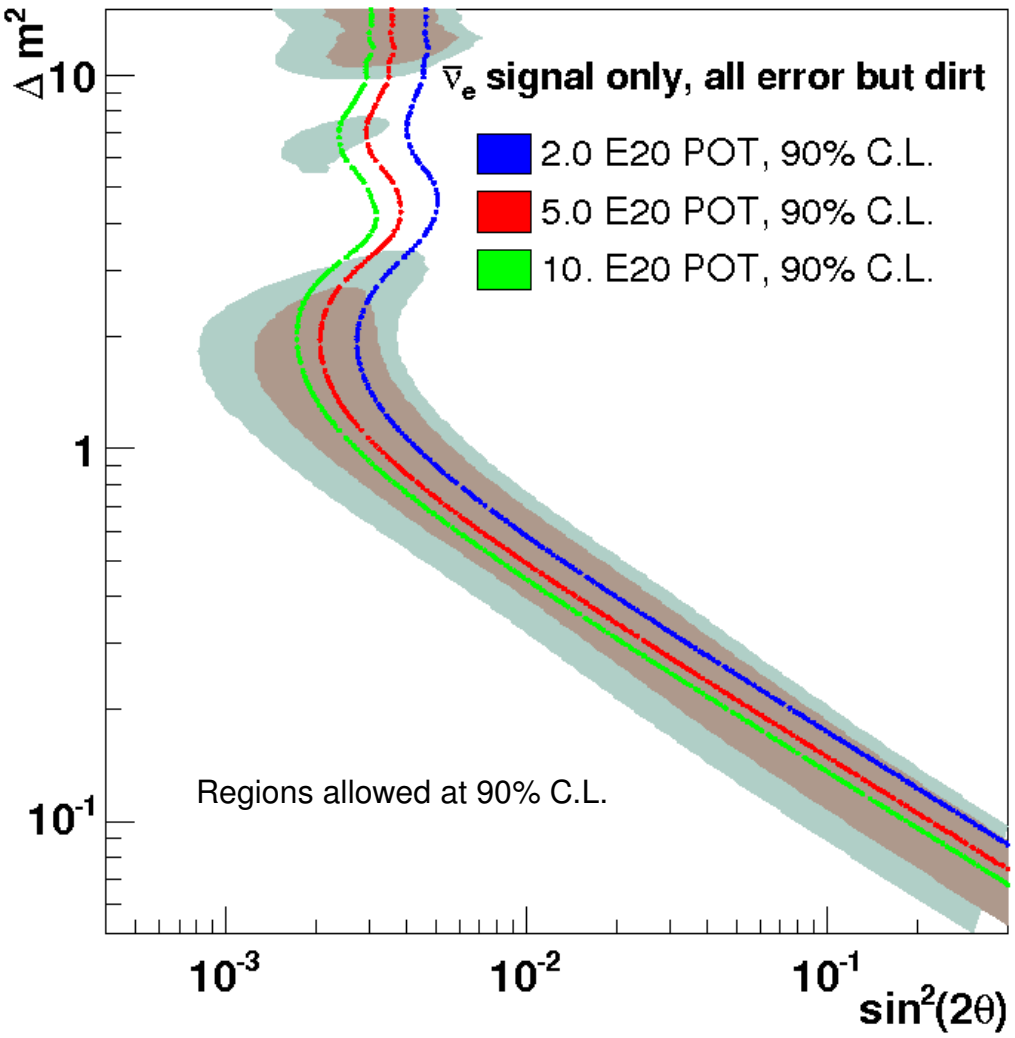
Week Summary 07 April – 14 April 0.4E18 POT, 18% Uptime

- With Booster down early in the week for MP02 magnet replacement, we decided to start Horn polarity switch (April 9)
- Horn work completed today (almost?).
  - Huge thanks to Al Russel, Howie Pfeffer, Ken Seivert and EE tech team for being able to starting work sooner than planned, and finishing in record time!
- Hope to begin operations today.

Summary

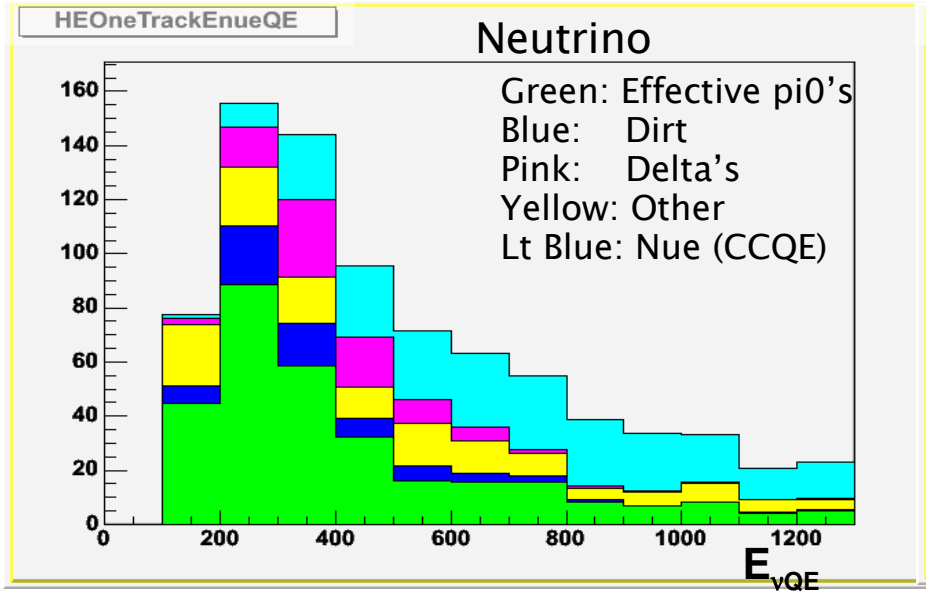
- Horn polarity switch and some minor detector maintenance completed (new ACNET DAQ machines, checked three broken channels).
- From Oct 2007 to April 2008, collected 1E20 POT in neutrino mode. Will add this data to current 5.58E20 POT for low energy analysis update.
- Start anti-neutrino run. Plan to collect another 3E20 POT (with no absorbers).

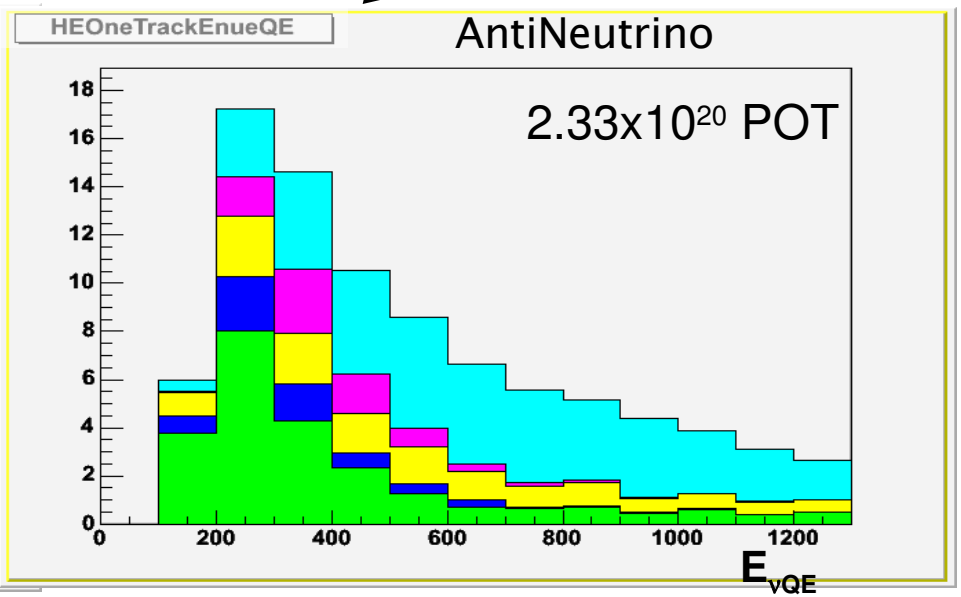
Sensitivity over LSND Region with extra 3E20 POT, giving a total of 5E20POT in Antineutrinos



Comparing Neutrino/Antineutrino Low Energy ν_e Candidates

The ν_e background breakdown is very similar between neutrino and antineutrino mode running





=> But different hypotheses for the excess can have measurably different effects in the two modes.

=> Can compare the two modes to test some of the hypotheses